

AMENDMENTS TO THE CLAIMS

1.- 41. (cancelled)

42. (currently amended) An in-vitro cell or cell line, in which there is expression of a functional chloride channel C1C-7, or a cell membrane preparation or an *in vitro* cell vesicle of said cell or cell line; wherein said cell or cell line and which:

(a) has been genetically modified to contain a transgene construct that overexpresses functional C1C-7; and/or and at least one of the following of (b) and (c):

(b) has been genetically modified to contain a transgene construct that directly reduces expression of functional chloride channels C1C-3; or

(c) has been genetically modified to contain a transgene construct that directly reduces expression of functional chloride channel C1C-6;

wherein the cell or cell line exhibits higher levels of expression of functional C1C-7 than of functional C1C-3 or functional C1C-6; or a cell membrane preparation or an *in vitro* cell vesicle of said cell or cell line.

43. (currently amended) A cell, or a cell line, as claimed in claim 42, in which the functional chloride channel C1C-7 is endogenously expressed, but in which one or both of functional chloride channels C1C-3 and C1C-6 is not expressed or is expressed to only a reduced extent or a cell membrane preparation or *in vitro* —— cell vesicle of a said cell or cell line.

44. (currently amended) A cell, or a cell line, as claimed in claim 43, which has been genetically modified to contain transgene constructs that directly reduce expression of both functional C1C-3 and functional C1C-6, wherein the cell or cell line exhibits higher levels of expression of functional C1C-7 than of functional C1C-3 and higher expression of functional C1C-7 than of functional C1C-6; or a cell membrane preparation or *in vitro* —— cell vesicle of a said cell or cell line.

45. (currently amended) A cell, or a cell line according to claim 42, which has been genetically modified to contain transgene constructs that directly reduce expression of each of the functional chloride channels C1C-3, C1C-4, C1C-5 and C1C-6, wherein the cell or cell line exhibits higher levels of expression of functional C1C-7 than of each of functional C1C-3, functional C1C-4, functional C1C-5 and functional C1C-6, ~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

46. (currently amended) A cell, or a cell line, according to claim 42, in which functional chloride channel C1C-7 is expressed, but in which functional chloride channels C1C-3, C1C-4, C1C-5 and C1C-6 are not expressed or are expressed to only a reduced extent, ~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

47. (currently amended) A cell, or a cell line according to claim 45, which has been genetically modified to contain transgene constructs that directly reduce expression of each of functional chloride channels C1C-1, C1C-2, C1C-Ka, C1C-Kb, C1C-3, C1C-4, C1C-5 and C1C-6, wherein the cell or cell line exhibits higher levels of expression of functional C1C-7 than of each of functional C1C-1, functional C1C-2, functional C1C-Ka, functional C1C-Kb, functional C1C-3, functional C1C-4, functional C1C-5 and functional C1C-6, ~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

48. (currently amended) An *in vitro* cell, or a cell line, ~~or an cell vesicle~~ in which there is expression of a functional chloride channel C1C-3, ~~or a cell membrane preparation or an in vitro cell vesicle of said cell or cell line; wherein said cell or cell line~~ and which:

(a) has been genetically modified to contain a transgene construct that overexpresses functional C1C-3; ~~and/or and~~

(b) has been genetically modified to contain a transgene construct that directly reduces expression of functional chloride channel C1C-7; wherein the cell or cell line exhibits higher levels of expression of the functional C1C-3 than of functional C1C-7,~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

49. (currently amended) A cell, or a cell line, as claimed in claim 48, which has been genetically modified to contain a transgene construct that directly reduces expression of functional chloride channel C1C-7,~~or a cell membrane preparation or in vitro cell vesicle of a said cell.~~

50. (currently amended) An *in vitro* cell, or a cell line in which there is expression of a functional chloride channel C1C-4,~~or a cell membrane preparation or an in vitro cell vesicle of said cell or cell line; wherein said cell or cell line and which:~~

(a) has been genetically modified to contain a transgene construct that overexpresses functional C1C-4; and/or

(b) has been genetically modified to contain a transgene construct that directly reduces expression of functional chloride channel C1C-7; wherein the cell or cell line exhibits higher levels of expression of functional C1C-4 than of functional C1C-7,~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

51. (currently amended) A cell, or a cell line, as claimed in claim 50, which expresses the chloride channel C1C-4, but does not express or expresses only to a reduced functional extent functional chloride channel C1C-7,~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

52. (currently amended) A cell, or a cell line, as claimed in claim 51, which expresses the chloride channel C1C-4, and which has been genetically modified to contain transgene constructs that directly reduce expression of each of functional chloride channels C1C-3, C1C-5, C1C-6 and C1C-7,~~, or a cell membrane preparation or an in vitro cell vesicle of a said cell or cell line.~~

53. (currently amended) An *in vitro* cell, or a cell line in which there is expression of a functional chloride channel C1C-6,~~, or a cell membrane preparation or an in vitro cell vesicle of said cell or cell line; wherein said cell or cell line and which:~~

- (a) has been genetically modified to contain a transgene construct that overexpresses functional C1C-6; and/or
- (b) has been genetically modified to contain a transgene construct that directly reduces expression of functional chloride channel C1C-7; wherein the cell or cell line exhibits higher levels of expression of functional C1C-6 than of functional C1C-7,~~, or a cell membrane preparation or an in vitro cell vesicle of a said cell or cell line.~~

54. (currently amended) A cell, or a cell line, as claimed in claim 53, which expresses the chloride channel C1C-6, but does not express or expresses only to a reduced extent functional chloride channel C1C-7,~~, or a cell membrane preparation or an in vitro cell vesicle of a said cell or cell line.~~

55. (currently amended) A cell, or a cell line, as claimed in claim 54, which expresses the chloride channel C1C-3 and the chloride channel C1C-6, but does not express or expresses only to a reduced functional extent functional chloride channel C1C-7,~~, or a cell membrane preparation or an in vitro cell vesicle of a said cell or cell line.~~

56. (currently amended) A cell, or a cell line, as claimed in claim 55, which expresses functional chloride channels C1C-1, C1C-2, C1C-Ka, C1C-Kb, C1C-3, C1C-4, C1C-5 and C1C-6,

but does not express or expresses only to a reduced extent functional chloride channel C1C-7,
~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

57. (currently amended) A cell, or a cell line, as claimed in claim 48, which expresses the chloride channel C1C-3, and which has been genetically modified to contain transgene constructs that directly reduce expression of each of functional chloride channels C1C-4, C1C-5, C1C-6 and C1C-7,
~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

58. (currently amended) A cell, or a cell line, as claimed in claim 53, which expresses the chloride channel C1C-6, and which has been genetically modified to contain transgene constructs that directly reduce expression of each of functional chloride channels C1C-3, C1C-4, C1C-5 and C1C-7,
~~or a cell membrane preparation or in vitro cell vesicle of a said cell or cell line.~~

59. (currently amended) A method for the identification and testing of substances suitable for inhibiting the chloride channel C1C-7, which method comprises contacting substances to be tested with cells, cell lines, cell membranes, or cell vesicles as claimed in claim 42 and measuring the effect of said substances on the activity of chloride channels in said cells, cell lines, cell membranes, or cell vesicles.

60. (previously presented) A method as claimed in Claim 59, for the identification and testing of active compounds for treatment of osteoporosis or Paget's disease.

61. (currently amended) A method for the identification and testing of substances suitable for inhibiting the chloride channel C1C-3, which method comprises contacting substances to be tested with cells, cell lines, cell membranes, or cell vesicles as claimed in claim 48 and measuring the effect of said substances on the activity of chloride channels in said cells, cell lines, cell membranes or cell vesicles.

62. (currently amended) A method for the identification and testing of substances suitable for inhibiting the chloride channel C1C-6, which method comprises contacting substances to be tested with cells, cell lines, cell membranes, or cell vesicles as claimed in claim 53 and measuring the effect of said substances on the activity of chloride channels in said cells, cell lines, cell membranes, or cell vesicles.

63. (currently amended) A method for the identification and testing of substances suitable for inhibiting the chloride channel C1C-4, which method comprises contacting substances to be tested with cells, cell lines, cell membranes, or cell vesicles as claimed in claim 50 and measuring the effect of said substances on the activity of chloride channels in said cells, cell lines, cell membranes or cell vesicles.

64. (previously presented) A method as claimed in Claim 59 or any one of claims 61 to 63, for the identification and testing of active compounds which are suitable as psychotropic pharmaceuticals.

65. (Currently Amended) A process for the identification and testing of substances which are suitable for inhibiting one or more chloride channels from the group consisting of C1C-3, C1C-4, C1C-6 and/or C1C-7, in which:

a) on cells according to any one of claims 42-to-58 42, 48, 50 and 53, the luminal pH of the compartments which express the channel and/or the potential across the membrane enclosing the channel is measured,

b) the cells are brought into contact with a substance and

c) the luminal pH of the compartments which express the channel and/or the potential across the membrane enclosing the channel is measured again on the cells,
the difference between the pH and/or the membrane potential before and after addition of the substance determining the activity of the substance.

66. (previously presented) A process according to claim 65, wherein the pH is measured by accumulation of substances in compartments with a particular pH or detection of indicator substances which are formed in pH-dependent reactions in the compartments.

67. (previously presented) A process according to claim 65, wherein the potential is measured using potential-sensitive dyestuffs or protein-coded potential sensors.